

ABSTRACT

A honeycomb structure of the present invention is a honeycomb structure 1 including: a cell structural part 2 including a plurality of cells 6 partitioned by partition walls 4 in a honeycomb shape to form flow paths allowing a fluid to flow therein; and an outer wall 3 disposed on an outer peripheral surface 7 of the cell structural part 2, characterized in that an outermost peripheral cell 9 of the cell structural part 2 and a predetermined number of cells positioned in an inner direction from the outermost peripheral cell among the cells 6 are sealed by an inner peripheral surface of the outer wall 3 in an end portion and/or an intermediate portion of at least one of the outermost peripheral cell and the outer peripheral cell in a central axis direction to constitute shielded cells 11, a temperature rising time of the cell structural part 2 after start of an operation shortens, and a catalytic activity can be enhanced in a short time when a catalyst is supported.